M/053/002

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2405

April 16, 1992

Ref: 8HWM-ER

Jason Knowlton
State of Utah
Department of Environmental Quality
Utah Division of Environmental
Response and Remediation
1950 West North Temple
Salt Lake City, Utah 84114

Dear Jason:

Enclosed is a Memorandum from Chris Weis, Superfund Toxicologist, regarding the Leeds Silver Reclamation site, Leeds, Utah. I have scheduled a May 5, 1992 site visit with Mark Sprenger, an Ecologist with U.S. EPA's Environmental Response Team, to assist in determining potential ecological impact downgradient of the heap leach operation. I have already spoken with Wayne Hedberg of the Division of Oil, Gas, and Mining (DOGM), and will confirm arrangements with both of you during the week of April 27, 1992.

Sincerely,

Peter D. Stevenson, OSC
Response Section, ERB

Enclosure

cc: Brad Johnson, UDERR
D. Wayne Hedburg, DOGM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2405

Ref: 8HWM-SM

MEMORANDUM

TO: Pete Stevenson, OSC
Response Section, ERB

FROM: Chris Weis, Toxicologist
Superfund Technical Section

SUBJECT: Leeds Silver Reclamation Site, Leeds, Utah

I have reviewed the data provided to me regarding the Leeds Reclamation site which was limited to the following:

-Your memo to Floyd Nichols dated February 11, 1992
-Analytical Results Report submitted by the Utah Department of Environmental Quality (UDERR); Draft 10/30/91

You have asked me to review the UDERR data from a public health standpoint and report to you regarding the threat posed by: (1) the mercury in the ore; (2) the heap leach material; (3) and the acidic water in the pregnant pond.

Given the few samples taken in various areas of the site, it is not possible to determine site variability or the existence of "hot spots" that might be of concern. With the exception of lead, however, most of the contaminants found on the site are chronic or long-term toxicants and of less concern for shorter-term exposures.

(1) As indicated in the report, one sample was taken in the ore stockpile. This sample is identified as LS-SO-02 and the material is described as Light-grey-brown fine-sand and silt. The mercury concentrations found in this sample, assuming that the mercury is present in its inorganic form, do not pose a significant threat for long term human exposure. Levels of arsenic and beryllium in the ore stockpile sample are slightly elevated considering long term (30 year) exposure.

(2) The heap leach pad covers approximately 4 acres at the center of the site. One sample, number LS-SO-03, was taken at the heap leach pad. This sample is designated in the report as "NE tailings pile". No metals in this sample are elevated above levels which would be of concern for either short term or longer-term human exposure.

(3) As indicated in the document and your memorandum, the pH of the water in the pregnant pond was recorded as 2.6. This

extremely acidic water is likely to pose a significant health risk for a variety of reasons. Specifically: (a) the acidic nature of the water may pose an acute health risk to children or other individuals trespassing on the site. Water with hydrogen ion concentrations this high may cause skin irritation or burns and may cause persistent or permanent damage to the eyes if contact were to occur; (b) The acidic pH in the pond is likely to solubilize heavy metals in the sediment and carry them to the ground water. Thus, the pond serves as a recharge area for heavy metals into the ground water. This assumes that the pond lining is discontinuous or may be in the future; (3) Acidic pH in the pond poses a significant threat to wild life in the area. Acidic runoff from the pond may enter downstream wetlands during storm events causing severe ecological stress in these areas.

cc: F. Nichols